

### **ABSTRACT OF THE DISCLOSURE**

A single crystal of quartz thin film and a production method therefor are provided. A method for producing a crystal epitaxial thin film comprises the steps of vaporizing a silicon alkoxide as a silicon source under atmospheric pressure to introduce the silicon alkoxide to a substrate with hydrogen chloride as a reaction promoter, and reacting ethyl silicate with oxygen to deposit a crystal on the substrate. The single crystal of quartz thin film has excellent crystallinity, and optical properties.

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